

WHAT IS CLAIMED IS:

1. A printing system including an information processing apparatus which outputs print data and a printing apparatus which receives the print data from
5 said information processing apparatus,
wherein said information processing apparatus comprising:
generation means for generating image data for respective printing color components based on data
10 to be print-outputted delivered from higher processing;
coding means for compress-encoding the image data for the respective printing color components generated by said generation means;
notification means for generating memory
15 allocation ratio information based on a ratio of coded data amounts for the respective printing color components coded by said coding means and notifying the information to said printing apparatus; and
output means for outputting the image data
20 for the respective printing color components coded by said coding means to said printing apparatus,
and wherein said printing apparatus comprising:
a reception buffer to temporarily store the image data for the respective printing color components
25 outputted by said output means;

plural decoding means, independently
provided for the respective printing color components,
for decoding coded data to image data; and

means for setting sizes of said reception
5 buffer allocated for the respective printing color
components, in accordance with the memory allocation
ratio information.

2. The printing system according to claim 1, wherein
10 respective areas of said reception buffer allocated for
the respective printing color components are utilized
as a ring buffer.

3. The printing system according to claim 1, wherein
15 said generation means includes dither processing means
for quantizing one-pixel eight-bit image data for one
printing color component into smaller-number-of-bit
image data.

20 4. The printing system according to claim 3, further
comprising designation means, having plural tables
respectively defining a set of dither matrix patterns
for a character or line-art area and a halftone image
area for the respective printing color components, for
25 designating one of the tables.

5. The printing system according to claim 4, wherein said notification means predict-calculates code data amounts for the respective printing color components based on the table designated by said designation means and sizes of halftone image area and character or line-art area for the respective printing color components.

6. The printing system according to claim 4, wherein said notification means calculates code data amounts for the respective printing color components by counting data amounts obtained by quantizing the halftone image areas and the character or line-art areas for the respective printing color components in accordance with the table designated by said designation means.

7. The printing system according to claim 6, wherein said information processing apparatus further comprising:

request means for requesting status information of said reception buffer from said printing apparatus;

determination means for determining whether or not next page compressed data for the respective printing color components can be stored in available areas of the reception buffer for the respective printing color components, based on the status information obtained by said request means; and

control means for, if said determination means determines that the next page compressed data can be stored, deleting the memory allocation ratio information to be notified by said notification means
5 and causing said output means to output the next page compressed data.

8. An information processing apparatus, which is connectable to a printing apparatus in which sizes of
10 reception buffer memory allocated for respective color components are changed in accordance with external instruction information, and which outputs print data to said printing apparatus, comprising:

generation means for generating image data for
15 respective printing color components based on data to be print-outputted delivered from higher processing;

coding means for compress-encoding the image data for the respective printing color components generated by said generation means;

20 notification means for generating memory allocation ratio information based on a ratio of coded data amounts for the respective printing color components coded by said coding means and notifying the information as said instruction information to said
25 printing apparatus; and

output means for outputting the image data for the respective printing color components coded by said coding means to said printing apparatus.

5 9. The information processing apparatus according to claim 8, wherein said generation means includes dither processing means for quantizing one-pixel eight-bit image data for one printing color component into smaller-number-of-bit image data.

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10. The information processing apparatus according to claim 9, further comprising designation means, having plural tables respectively defining a set of dither matrix patterns for a character or line-art area and a
15 halftone image area for the respective printing color components, for designating one of the tables.

11. The information processing apparatus according to claim 10, wherein said notification means predict-
20 calculates code data amounts for the respective printing color components based on the table designated by said designation means and sizes of halftone image area and character or line-art area for the respective printing color components.

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12. The information processing apparatus according to claim 10, wherein said notification means calculates

code data amounts for the respective printing color components by counting data amounts obtained by quantizing the halftone image areas and the character or line-art areas for the respective printing color components in accordance with the table designated by said designation means.

13. The information processing apparatus according to claim 12, further comprising:

10 request means for requesting status information of said reception buffer from said printing apparatus;

 determination means for determining whether or not next page compressed data for the respective printing color components can be stored in available areas of the reception buffer for the respective printing color components, based on the status information obtained by said request means; and

 control means for, if said determination means determines that the next page compressed data can be stored, deleting the memory allocation ratio information to be notified by said notification means and causing said output means to output the next page compressed data.

25 14. A control method for an information processing apparatus, which is connectable to a printing apparatus in which sizes of reception buffer memory allocated for

respective color components are changed in accordance with external instruction information, and which outputs print data to said printing apparatus, said method comprising:

5 a generation step of generating image data for respective printing color components based on data to be print-outputted delivered from higher processing;

 a coding step of compress-encoding the image data for the respective printing color components generated
10 at said generation step;

 a notification step of generating memory allocation ratio information based on a ratio of coded data amounts for the respective printing color components coded at said coding step and notifying the
15 information as said instruction information to said printing apparatus; and

 an output step of outputting the image data for the respective printing color components coded at said coding step to said printing apparatus.

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15. A printer driver program for an information processing apparatus, which is connectable to a printing apparatus in which sizes of reception buffer memory allocated for respective color components are
25 changed in accordance with external instruction information, and which outputs print data to said printing apparatus, said program functioning as:

generation means for generating image data for respective printing color components based on data to be print-outputted delivered from higher processing;

coding means for compress-encoding the image data
5 for the respective printing color components generated by said generation means;

notification means for generating memory allocation ratio information based on a ratio of coded data amounts for the respective printing color
10 components coded by said coding means and notifying the information as said instruction information to said printing apparatus; and

output means for outputting the image data for the respective printing color components coded by said
15 coding means to said printing apparatus.

16. A computer-readable storage medium holding the printer driver program according to claim 15.